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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/530,709	04/08/2005	Hans-Christoph Magel	R.305060	6972
2119	7590	06/30/2006		
RONALD E. GREIGG GREIGG & GREIGG P.L.L.C. 1423 POWHATAN STREET, UNIT ONE ALEXANDRIA, VA 22314			EXAMINER MCGRAW, TREVOR EDWIN	
			ART UNIT 3752	PAPER NUMBER

DATE MAILED: 06/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/530,709	<b>Applicant(s)</b> MAGEL, HANS-CHRISTOPH	
	<b>Examiner</b> Trevor McGraw	<b>Art Unit</b> 3752	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 March 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

***Response to Amendment***

**Rejection under 35 USC § 112**

Applicant's arguments, see pages 5 and 6, filed 03/08/2006, with respect to the rejection(s) of claim(s) 13 under 35 USC § 112 Second Paragraph have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. Examiner indicated Allowable Subject Matter stating that claims 13-24 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims in the previous Office Action mailed to applicant 12/15/2005. However, upon further consideration of prior art, a new ground(s) of rejection is made in view of Magel (DE10218904).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Magel (WO/02/093001).

In regard to claims 13-24, Magel (DE10218904) teaches a fuel injector having a pressure booster (57) with a booster piston (56) that separates a working chamber (58)

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from a differential pressure chamber (Figure 4) that can be pressure relieved where the working chamber is continuously acted upon by means of pressure source where in actuation of a Piezoelectric valve causes a opening and closing of hydraulic connection (45) of a differential pressure chamber (Figure 4) with a first and second return on a low pressure side off a high pressure region where a first sealing seat (53) seals a return (44) on the low pressure side from the high pressure region of a valve that has a control chamber with a first and second hydraulic chamber (Figure 4). However, Magel fails to teach a servo valve having a first and second sealing surface for sealing communication of a separate control and hydraulic chamber where the servo valve can be pressure relieved by means of a valve where operation of the valve opens or closes the hydraulic connection (45). In view of applicant's admitted prior art of claim 13, it would have been obvious to one with ordinary skill in the art at the time of the present invention to combine a well known in the art servo valve with first and second sealing seats to seal a control and hydraulic chamber to the teachings of Magel so as to better control the pressure differential surges within a valve body and keep the injection supply and return processes controlled by two separate valves.

### ***Claim Objections***

Claims 14-24 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Magel (US 6,892,703), Gurich et al. (US 6,811,103), Boecking (US 6,871,636) .

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trevor McGraw whose telephone number is (571) 272-7375. The examiner can normally be reached on Monday-Friday (2nd & 4th Friday Off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Scherbel can be reached on (571) 272-4919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Trevor McGraw  
Art Unit 3752

TEM



David A. Scherbel  
Supervisory Patent Examiner  
Group 3700